

## REMARKS

### **I. General Remarks**

Claims 1 and 3 have been amended, and claim 4 has been added.

### **II. Remarks Regarding Obviousness Rejection Under 35 U.S.C. § 103**

#### **A Prima Facie Case of Obviousness Is Not Established by the Cited References Because the Proposed Combination of References Renders the Prior Art Inoperable**

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,367,999 issued to King et al. (hereinafter "King") in view of U.S. Patent No. 6,176,224 issued to Wu et al. (hereinafter "Wu") and further in view of U.S. Patent No. 6,131,552 issued to Paielli et al. (hereinafter "Paielli"). Applicants respectfully traverse.

The Examiner suggests that the cited references may be combined as follows:

King et al does not disclose a variable venturi or fixed venturi carburetor in communication with the fuel line outlet and the engine. King et al. also does not disclose controllable valve is a rotary actuated valve. However, Wu et al discloses controllable valve 24 is a rotary actuated butterfly valve 24. Paielli et al discloses a variable venturi or fixed venturi carburetor 18 in communication with the fuel line outlet 17 and the engine 12. It would have been obvious to a person having ordinary skill in the art to modify King et al by obvious substitution of rotary actuated butterfly valve 24 as taught by Wu et al and a carburetor 18 as taught by Paielli et al in order to provide King et al engine with carburetor 18 in lieu of fuel injector 26 and to provide King et al engine with butterfly valve 24 in lieu of valve 16.

Final Office Action at 3-4.

A prima facie case of obviousness, when based on multiple references, requires a motivation or suggestion to combine the cited references. M.P.E.P. § 2143. Applicants respectfully submit that no motivation to combine the cited references has been shown, and therefore, the cited references fail to establish a valid prima facie of obviousness. Further, the proposed combination of references

would render the prior art unsatisfactory for its intended purpose as explained below. The M.P.E.P. explains that “[i]f proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” M.P.E.P. § 2143.01 (citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

In particular, King is directed to a fuel injection delivery system that uses a fuel injector. Accordingly, King teaches the use of a fuel metering valve such as the one depicted in Figure 4 of King. This type of fuel metering valve is entirely different than the rotary actuated butterfly valve claimed by Applicants to arrive at the specific combination of elements of Applicants’ claims. The Examiner suggests incorporating the butterfly valve of Wu into the fuel injection system of King. This combination, however, would render the system of King inoperable, because King requires a small-precision fuel metering valve to function appropriately as the King system is directed to a fuel-injection delivery system, unlike Applicant’s claimed system.

Additionally, Examiner’s proposed combination of Paielli with King would change the fundamental principle of operation of the prior art. As explained in M.P.E.P. § 2143.01, “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious.” (citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)). In particular, the Examiner proposes incorporating the carburetor of Paielli into the fuel injection system of King. This proposed change would fundamentally change the principle of operation of the King fuel injection system. Fuel delivery systems function via a fuel injection system or via a carburetor, but not both. Thus, incorporating the carburetor of Paielli into King would not only

change the fundamental principle of operation of the King fuel injection system, but it would also render the King fuel injection system inoperable.

Applicants further point out that Paielli does not explicitly teach a venturi carburetor as recited in Applicants' claims. Instead, Paielli teaches a carburetor in general but does not specifically teach a venturi-type carburetor. Accordingly, the combination of cited references also fails to teach each and every limitation of Applicants' claims as required by M.P.E.P. § 2143.03.

To the extent that the Examiner is relying on common or personal knowledge or taking official notice without documentary evidence to supply the missing elements or motivation combine or modify to the cited references, including unsubstantiated statements of what would be obvious to a person having ordinary skill in the art such as the statement in the Final Office Action at 3, Applicants respectfully traverse under M.P.E.P. § 2144.03(C) by requesting either (1) documentary evidence establishing the missing motivation to combine/modify the cited references, or (2) an affidavit setting forth the specific factual statements and explanation to support the Examiner's finding in accordance with 37 C.F.R. § 1.104(d)(2).

For at least these reasons, Applicants respectfully request removal of the 35 U.S.C. § 103(a) rejection as to claims 1-3.

#### **SUMMARY**

A check in the amount of \$60.00 is enclosed herewith for a one month extension of time. As the shortened statutory period for reply ends on June 20, 2006, the one month time extension extends the period for reply up to and including July 20, 2006. Authorization is hereby given to charge Deposit Account No. 10-0096 for any deficiency of fees.

If the Examiner has any other matters which pertain to this Application, the Examiner is encouraged to contact the undersigned to resolve these matters by Examiner's Amendment where possible. A prompt examination and allowance of the pending claims is earnestly solicited.

Respectfully submitted,

JACKSON WALKER L.L.P.

A handwritten signature in black ink, appearing to read 'Mark A. Tidwell', is written over a horizontal line.

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